

CLAIMS

What is the claimed is:

1. A method for a precise analyzing of an environment, providing counting and measuring a particles in said environment, includes the steps of:

detecting said particles by a wireless communicating remote detecting system, comprising a wireless communication means of said wireless communicating remote detecting system and a particle detecting system;

forming in said particle detecting system a data, containing an information about an assayed environment;

converting said data to a form, which is acceptable for a wireless communication of said wireless communicating remote detecting system with a wireless communicating remote data processing and control system, including a wireless communication means of said wireless communicating remote data processing and control system and a microprocessor system;

wireless communicating between said wireless communicating remote detecting system and said wireless communicating remote data processing and control system;

processing of said data by said wireless communicating remote data processing and control system.

2. The method of claim 1, wherein said wireless communication means of said wireless communicating remote detecting system and said wireless communication means of said wireless communicating remote data processing and control system provide a two-way wireless communication.

3. The method of claim 2, wherein said two-way wireless communication is provided by a transmitting-receiving means of said wireless communication means of said wireless communicating remote detecting system via an aerial means of said wireless communication means of said wireless communicating remote detecting system and by a transmitting-receiving means of said wireless communication means of said wireless communicating remote data processing and control system via an aerial means of said wireless communication means of said wireless communicating remote data processing and control system.

4. The method of claim 2, wherein said two-way wireless communication provides:

a transmitting of a control signals from a wireless communicating remote data processing and control system to a wireless communicating remote detecting system;

a receiving of said control signals by said wireless communicating remote detecting system;

a transmitting of a data from said wireless communicating remote detecting system to

said wireless communicating remote data processing and control system;

a receiving of said data by said wireless communicating remote data processing and control system.

5. An apparatus for a precise analyzing of an environment, including $N = 1, 2, \dots, i, \dots, n$, wireless communicating remote detecting systems and a wireless communicating remote data processing and control system, which comprises:

a microprocessor system, including a terminal means, a conversion means of said microprocessor system, a microprocessor means, which are connected to each other by a multiplexed bus;

a wireless communication means, including a transmitting-receiving means, comprising a transmitting means and a receiving means, and an aerial means connected to said transmitting-receiving means.

6. The apparatus of claim 5, wherein said terminal means includes a displaying means, a floppy disk means, a compact disk means, a printing means and a control panel connected to each other by said multiplexed bus.

7. The apparatus of claim 5, wherein said conversion means of said microprocessor system is

connected to a transmitting-receiving means of said wireless communication means.

8. The apparatus of claim 5, wherein said microprocessor system is connected to said wireless communication means.

9. The apparatus of claim 5, wherein said multiplexed bus is presented by a data bus and an address bus.

10. The apparatus of claim 5, wherein each of said $N = 1, 2, \dots, i, \dots, n$ wireless communicating remote detecting systems, which comprises:

a particle detecting system, including a particle detecting means connected to a signal processing system, which is connected to a conversion system connected to a transmitting-receiving means of said wireless communication means of said wireless communicating remote detecting system;

a wireless communication means, including a transmitting-receiving means, comprising a transmitting means and a receiving means, and an aerial means connected to said transmitting-receiving means.

11. The apparatus of claim 10 wherein said particle detecting means includes a tubular means,

coupling a detection means and an environment assaying control means, wherein said detection system is connected to a detected signal processing means, and wherein said environment assaying control means is connected to a signal processing means and to a control signal conversion means.

12. The apparatus of claim 10 wherein said signal processing system includes a signal processing means connected to a detected signal processing means, to said conversion system and to a control signal conversion means, which is connected to a control means.

13. The apparatus of claim 10 wherein said conversion system includes a conversion means connected to a coding-decoding means.

14. The apparatus of claim 10, wherein said particle detecting system is connected to said wireless communication means.

15. A method for a precise analyzing of an environment, providing a timing processing of a detected signals, containing an information about the particle characteristics, includes the steps of:
converting said detected signals to a pulse durations, which depend on said particle characteristics; by that forming a different duration pulses;
strobing said different duration pulses by a strobe pulses; thereby forming a strobe pul-

se packages;

counting a quantity of said strobe pulses within said strobe pulse packages;

selecting and sorting said strobe pulse packages by the same said quantity of said strobe pulses within said strobe pulse packages;

counting a quantity of an identical strobe pulse packages.

16. The method of claim 15, wherein said quantity of said strobe pulses within said strobe pulse packages contains an information about particle size.

17. The method of claim 15, wherein said quantity of said identical strobe pulse packages contains an information about particle quantity.

18. An apparatus for a precise analyzing of an environment, providing a timing processing of a detected signals, containing an information about the particle characteristics, includes:

a detection means, comprising a light detecting means;

a detected signal processing means;

a signal processing means.

19. The apparatus of claim 18, wherein said detected signal processing means comprises a

current-voltage conversion means connected to an amplifying means, which is connected to a voltage-pulse duration conversion means.

20. The apparatus of claim 18, wherein said light detecting means is connected to a current-voltage conversion means of said detected signal processing means, and wherein said signal processing means comprises a strobe pulse generating means and a selecting, sorting and counting means, which are connected to a conjunction means, which is connected to a voltage-pulse duration conversion means of said detected signal processing means.

THE DRAWING REFERENCE NUMERALS WORKSHEET

1. - a detector (a prior art);
2. - a parallel processor (a prior art);
3. - a transmitting-receiving means of the wireless communication means 36;
4. - a particle detecting system;
5. - a remote detecting system;
6. - a microprocessor means;
7. - a multiplexed bus of the remote data processing and control system 13;
8. - a displaying means;
9. - a floppy disk means;
10. - a compact disk means;
11. - a printing means;
12. - a control panel;
13. - a remote data processing and control system;
14. - a first remote detecting system;
15. - a second remote detecting system;
16. - an I-th remote detecting system;
17. - a n-th remote detecting system;

18. - a particle detecting system of the first remote detecting system 14;
19. - a particle detecting system of the second remote detecting system 15;
20. - a particle detecting system of the I-th remote detecting system 16;
21. - a particle detecting system of the n-th remote detecting system 17;
22. - a transmitting-receiving means of the first remote detecting system 14;
23. - a transmitting-receiving means of the second remote detecting system 15;
24. - a transmitting-receiving means of the I-the remote detecting system 16;
25. - a transmitting-receiving means of the n-th remote detecting system 17;
26. - a central transmitting-receiving means;
27. - a microprocessor system;
28. - a central aerial means;
29. - a transmitting means;
30. - a receiving means;
31. - a conversion system;
32. - a signal processing system;
33. - a particle detecting means;
34. - an aerial means of the wireless communication means 36;
35. - a wire connection (a prior art);
36. - a wireless communication means of the remote detecting system 5;

37. - a tubular means;
38. - a terminal means;
39. - a conversion means of the microprocessor system 27;
40. - a detection means;
41. - an environment assaying control means;
42. - a detected signal processing means;
43. - a control means;
44. - a signal processing means;
45. - a control signal conversion means;
46. - a wireless communication means of the first remote detecting system 14;
47. - a wireless communication means of the second remote detecting system 15;
48. - a wireless communication means of the I-th remote detecting system 16;
49. - a wireless communication means of the n-th remote detecting system 17;
50. - a central wireless communication means;
51. - a coding-decoding means;
52. - an aerial means of the first remote detecting system 14;
53. - an aerial means of the second remote detecting system 15;
54. - an aerial means of the I-th remote detecting system 16;
55. - an aerial means of the n-th remote detecting system 17;
56. - a wireless communication means of the remote data processing and control system 13;

57. - an aerial means of the wireless communication means 56;
58. - a transmitting-receiving means of the wireless communication means 56;
59. - a multiplexed bus of the remote detecting system 5;
60. - a detection unit (a prior art);
61. - an amplifier (a prior art);
62. - a comparator (a prior art);
63. - a reference voltage means (a prior art);
64. - a conversion means of the conversion system 31.
65. - a control logic (a prior art);
66. - a pulse height analyzer (a prior art);
67. - a light detecting means;
68. - a light detecting system;
69. - a current-voltage conversion means;
70. - an amplifying means
71. - a voltage-pulse duration conversion means;
72. - a conjunction means;
73. - a strobe pulse generating means;
74. - a selecting, sorting and counting means;
75. - a sensor (a prior art);
76. - a microprocessor (a prior art).